

Application Serial No. 09/622,356

Page 3 of 14

Date December 23, 2003

Reply to Office Action dated October 23, 2003

Listing of the Claims:

Claims 1 - 8 (Cancelled)

9. (Currently Amended) A four-hinged wiper arm for a windshield wiper system, comprising:

a connecting rod pivotally connected to a driving arm at a first bearing point on the connecting rod and to a control arm at a second bearing point on the connecting rod, a hinged part coupled to the connecting rod at an axis, a wiper blade placable on one of the hinged part and a wiper rod connected to the hinged part can be pressed against the windshield to be wiped by a spring element that is mounted on the four-hinged wiper arm, wherein one of the connecting rod, the driving arm, and the control arm is provided with a co-axial rolling-contact bearing relative to a passage in at least one of the first and second bearing points of the four-hinged wiper arm and inner and outer races of the bearing are axially and radially fixed to be non-rotatable with respect to the connecting rod and at least one of the control arm and driving arm allowing transmission of large radial and axial forces without play.

10. (Previously Presented) The four-hinged wiper arm according to claim 9, characterized in that at least one of the rolling-contact bearings is a deep groove ball bearing.

11. (Previously Presented) The four-hinged wiper arm according to claim 9 characterized in that the driving arm and the control arm are made of sheet metal.

12. (Previously Presented) The four-hinged wiper arm according to claim 9 characterized in that an outer ring of the at least one rolling-contact bearing is axially secured and held, so that it does not rotate in one recess of the connecting rod whereas a bolt, attached to one of the driving arm and the control arm, is fitted into

Application Serial No. 09/622,356

Page 4 of 14

Date December 23, 2003

Reply to Office Action dated October 23, 2003

an inner ring of the rolling-contact bearing and is axially secured and non-rotatably held.

13. (Previously Presented) The four-hinged wiper arm according to claim 12 characterized in that the bolt used on the at least one first and second bearing point is a riveted bolt.

14. (Currently Amended) The four-hinged wiper arm according to claim 13, characterized in that the riveted bolt is secured by wobble riveting ~~in a~~ the passage of one of the driving arm and control arm, and by wobble riveting at the inner ring of the rolling-contact bearing, wherein the riveted bolt has a radially protruding flange in a middle region, with one side that rests against one of the driving arm and the control arm, and another side that rests against a front surface of the inner ring of the rolling-contact bearing.

15. (Cancelled).

16. (Previously Presented) The four-hinged wiper arm according to claim 9, further comprising a rolling-contact bearing with a deep groove ball bearing both at the first bearing point between the connecting rod and the driving arm and at the second bearing point between the connecting rod and the control arm.

17. (Currently Amended) In a four-hinged wiper arm for a windshield wiper, having a connecting rod pivotally connected to a driving arm at a first bearing point on the connecting rod and to a control arm at a second bearing point on the connecting rod and a hinged part coupled to the connecting rod and a wiper rod connected to the hinged part for pressing against the windshield to be wiped by a spring element mounted on the four-hinged wiper arm, the improvement comprising:

Application Serial No. 09/622,356

Page 5 of 14

Date December 23, 2003

Reply to Office Action dated October 23, 2003

a rolling-contact bearing provided with one of the connecting rod and driving arm in at least one of the first and second bearing points of the four-hinged wiper arm wherein the rolling contact bearing has a first member axially fixed in a recess of one of the connecting rod and driving arm and a second member maintaining coaxially aligned to the first member in a non-play relationship.

18. (Previously Presented) The improvement according to claim 17, wherein at least one of the rolling-contact bearings is a deep groove ball bearing.

19. (Previously Presented) The improvement according to claim 17 wherein the driving arm and the control arm are made of sheet metal.

20. (Previously Presented) The improvement according to claim 17 wherein the rolling-contact bearing has an inner and outer ring and that the outer ring of the at least one rolling-contact bearing is axially secured and held, so that it does not rotate in one recess of the connecting rod whereas a bolt, attached to one of the driving arm and the control arm, is fitted into the inner ring of the rolling-contact bearing and is axially secured and non-rotatably held.

21. (Previously Presented) The improvement according to claim 20, wherein the bolt used on the at least one first and second bearing point is a riveted bolt.

22. (Previously Presented) The improvement according to claim 21, wherein the riveted bolt is secured by wobble riveting in a passage in one of the driving arm and control arm, and by wobble riveting at an inner ring of the rolling-contact bearing.

Application Serial No. 09/622,356

Date December 23, 2003

Pag 6 of 14

Reply to Office Action dated October 23, 2003

23. (Previously Presented) The improvement according to claim 22, wherein the riveted bolt has a radially protruding flange in a middle region, with one side that rests against one of the driving arm and the control arm, and another side that rests against a front surface of the inner ring of the rolling-contact bearing.

24. (Previously Presented) The improvement according to claim 17, further comprising a rolling-contact bearing with a deep groove ball bearing both at the first bearing point between the connecting rod and the driving arm and at the second bearing point between the connecting rod and the control arm.

25. (Previously Presented) The improvement according to claim 20, wherein the bolt includes a radially protruding flange having one side resting against the inner ring and an opposing side resting against one of the driving arm and control arm.

26. (Previously Presented) A four-hinged wiper arm for a windshield wiper system comprising:

a connecting rod pivotally connected to a driving arm at a first bearing point on the connecting rod and to a control arm at a second bearing point on the connecting rod, a hinged part coupled to the connecting rod at an axis, a wiper blade placable on one of the hinged part and a wiper rod connected to the hinged part to be pressed against the windshield to be wiped by a spring element mounted on the four-hinged wiper arm, wherein at least one of the connecting rod, the driving arm, and the control arm is provided with a rolling-contact bearing in at least one of the first and second bearing points of the four-hinged wiper arm, at least one of the first and second bearing points having an outer ring of a deep groove ball bearing secured in an axially-fixed, non-rotatable manner within a recess of the connecting rod, one end of a riveted bolt fixedly secured into a passage in at least one of the driving arm and the control arm with an opposite end of the riveted bolt being connected

Application Serial No. 09/622,356

Page 7 of 14

Date December 23, 2003

Reply to Office Action dated October 23, 2003

non-rotatably to the inner ring of the deep groove ball bearing, such that the first and second bearing points provide non-play transmission of large radial and axial forces.